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Efficacy Of Sacubitril/valsartan In Hemodialysis Patients With Heart Failure: A Single Center Experience

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Objectives : Heart failure is one of the main causes of increased hospitalization rates, morbidity, and mortality in patients with chronic kidney disease. Sacubitril/valsartan was shown to reduce mortality and hospitalization rates in heart failure patients with reduced ejection fraction (EF) in the PARADIGM-HF trial. However, data on safety or efficacy in dialysis patients are rare. We aim to analyze the efficacy of sacubitril/valsartan in hemodialysis patients.

Methods : We retrospectively analyzed the medical records of 31 patients taking sacubitril/valsartan and receiving maintenance hemodialysis. Five patients were excluded because they discontinued medication within 3 months due to repeated low blood pressure during hemodialysis. Ultimately, the echocardiogram and blood test results of 26 patients were analyzed. We compared and analyzed the test results before taking the drug and the results after taking the drug for at least 3 months. The results before taking the drug Paired samples t-test analysis was performed to analyze the effect of drugs. Statistical significance was set at $P < 0.05$.

Results : There were 17 (65.3%) patients taking 50mg bid as a maintenance dose. The average duration of medication use was 16.35 ± 11.21 month. There was no significant difference in potassium, calcium, and phosphorus levels depending on medication use. After taking sacubitril/valsartan, EF was found to increase significantly ($P < 0.001$). Left ventricular end-diastolic volume and left ventricular end-systolic volume were found to significantly decrease after taking the drug ($P = 0.01$, $P = 0.023$ respectively). There were no significant changes in left atrial volume and left atrial volume index. Of the 26 patients, 3 patients stopped taking the drug due to death, which was not related to the drug.

Conclusions : Sacubitril/valsartan significantly improves cardiac function in hemodialysis patients with heart failure.